PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Marina Larson
Oppedahl & Larson LLP
256 Dillion Ridge Road, 2nd Fl.
P O Box 5068
Dillion, Colorado 80435-5068

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	30 JAN 2006
Applicant's or agent's file reference vaip035wo	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US05/25633	20 JUL 2005	20 JULY 2004

International Patent Classification (IPC) or both national classification and IPC
G06F 7/00; 700/224; 340/10.5; 705/22

Applicant
Visible Assets, Inc.

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [X] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	11/10/2005	for Blaine R. Copenheaver Telephone No. 571-272-7774

Form PCT/ISA/237 (cover sheet) (April 2005)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/25633

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed

   ☐ a translation of the international application into _____ , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material

      ☐ on paper

      ☐ in electronic form

   c. time of filing/furnishing

      ☐ contained in the international application as filed

      ☐ filed together with the international application in electronic form

      ☐ furnished subsequently to this Authority for the purposes of search

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/25633

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	3,4,7,11,14,15,17-51	YES
	Claims	1,2,5,6,8-10,12,13,16	NO
Inventive step (IS)	Claims	7,31-35,41-51	YES
	Claims	1-6,8-30,36-40	NO
Industrial applicability (IA)	Claims	1-51	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1,2,5,6,8-10,12 and 16 lack novelty under PCT Article 33(2) as being anticipated by US 2004/0008123 A1 to CARRENDER et al, hereafter referred to as Carrender.

Referring to claim 1, Carrender discloses an object operable for communicating wireless radio frequency (RF) signals (a medication bottle cap having an RFID tag (see Abstract, Figure 3A and Claim 1), said object comprising an antenna integrated therewith (the RFID tag has an integrated antenna (see Paragraph 0035)).

Referring to claim 2, Carrender discloses said integrated antenna being embedded into said object (the RFID tag is embedded in the cap of the bottle and has an antenna (see Figure 3A and paragraph 0035)).

Referring to claim 5, Carrender discloses said object comprising a product and an RFID tag attached thereto (the RFID is in the medication bottle cap (see Figure 3A and Claim 1)), said RFID tag comprising a transmitter and a tag antenna operable to transmit wireless RF signals to said integrated antenna (the RFID in the bottle cap has an antenna and transmits and receives signals with an interrogator (see Figure 3A and Paragraphs 0034 and 0040)).

Referring to claim 6, Carrender discloses said object comprising a receptacle (a bottle functions an a receptacle for medication (see Figure 3A and Claim 1)) and an RFID tag attached thereto (the Cap of the bottle has an integral RFID tag (see Figure 3A and Claim 1)), said RFID tag comprising a transmitter and a tag antenna operable to transmit wireless RF signals to said integrated antenna (the RFID in the bottle cap has an antenna and transmits and receives signals with an interrogator (see Figure 3A and Paragraphs 0034 and 0040)).

Referring to claim 8, Carrender discloses an active tag that includes a microprocessor, a data storage device operable to store a selected code (the RFID is used to identify the products and their conditions and can be active (see Paragraph 0028)), upon a signal from said microprocessor and an energy storage device operable to energize said microprocessor, and said transmitter (active RFID tags have their own power source (see Paragraph 0028). Furthermore, Carrender discloses that the tag includes a display for displaying the selected code (see paragraph 0040)).

Referring to claim 9, Carrender discloses said receptacle being operable to hold a product (the bottle holds medication (see Figure 3A)), said receptacle comprising a sensor operable to generate a signal characteristic of a condition experienced by said product (the cap also contains a sensor that detects certain conditions such as the age of the medication and if the seal of the cap has been broken (see Figure 3A and Paragraph 0013)).

Referring to claim 10, Carrender discloses said object comprising an RFID tag embedded therein (the RFID is embedded in the cap (see Figure 3A and Paragraph 0040)).

Referring to claim 12, Carrender discloses said object comprises a product (a medication bottle (see Figure 3A))

Referring to claim 16, Carrender discloses a body portion operable to hold a product (a medication bottle that holds medication (see Figure 3A)), an RFID tag attached to said body portion (cap of the bottle has an integral RFID tag (see Figure 3A and Claim 1)) said RFID tag comprising a receiver, a transmitter, and an antenna, said antenna being integrated into a unitary relationship with said body portion (the RFID in the cap has a transmitter, receiver and antenna integrated therewith (see Figure 3A and Claim 1)). Note, the cap can be considered as part of the 'body' of the bottle.

Claim 3 lacks an inventive step under PCT Article 33(3) as being obvious over Carrender in view of WO 01/69525 A1 to Kirkham.

Referring to claim 3, Carrender discloses the system discussed above. Carrender does not disclose said integrated antenna having a dimension thereof that is substantially as large as a dimension of said object. However, Kirkham discloses a system wherein RFID antennas are sized as the size of the package (see Figure 3, Claim 13 and Pages 8-11). It would have been obvious to one skilled in the art at the time of the invention to implement the antenna in Carrender in this manner because having a larger antenna will make it easier for receiving signals.

Claim(s) 4,14,17,18,29 and 30 lack an inventive step under PCT Article 33(3) as being obvious over Carrender in view of US 2003/0174099 A1 to Bauer et al, hereafter referred to as Bauer.

Referring to claims 4, 14, 17 and 18, Carrender discloses the system discussed above. Carrender does not disclose that the wireless operating frequency of the RFID elements does not exceed 15Mhz, 1MHz or 300 kHz. However, Bauer discloses an RFID system that may operate in the low frequency band of 125 kHz (see Paragraph 0008). It would have been obvious to one skilled in the art at the time of the invention to operate the Carrender system at this low frequency because doing so will make the system more versatile in that it can operate at other frequencies. Furthermore, operating at a lower frequency requires less power and it will decrease power consumption.

Referring to claims 29 and 30, Carrender discloses said RFID tag further comprising an indicator element for indicating impending expiry of viability of said product (a detector detects the remaining shelf life of the medication (see Abstract and Paragraph 0009)).

See Supplemental Box

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/25633

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1,5,6,8,24,36,41,42,46 and 47 are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof:

Claims 1,5,6,8,41,42,46 and 47 recite various examples shown in parenthesis. It is unclear whether these examples are limitations of the claims.

Claim 24 recites "...said environmental..." ; there is a lack of antecedent basis for this limitation of the claim.

Claim 36 recites "A receptacle as set forth in Claim 19, said receptacle comprising a pallet operable to hold a plurality of containers as set forth in Claims 23,25,29..." It is unclear what the meets and bounds are of this claim due to reference back to claims 23,25 and 29. Note, it does not appear as though this claim is written in proper multiple dependent form since it appears to refer back to two sets of claims.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/25633

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Citations and explanations:
Claim 11 lacks an inventive step under PCT Article 33(3) as being obvious over Carrender in view of Bauer and further in view of US 6,084,513 B1 to Stoffer.

Referring to claim 11, Carrender discloses an embedded antenna. However, Carrender does not disclose that the embedded antenna is a ferrite loop (see Figure 1). However, Stoffer discloses a wireless communications system wherein the antenna comprises a ferrite loop (see Column 7 Lines 58-65). It would have been obvious to one skilled in the art at the time of the invention to use ferrite for the antenna loop in Carrender, because ferrite provides good resistance to demagnetization, excellent corrosion resistance and is low-cost.

Claims 19,20,25-28 and 36 lack an inventive step under PCT Article 33(3) as being obvious over Carrender in view of Bauer and further in view of Kirkham.

Referring to claims 19, 20 and 36, Carrender discloses the system discussed above. Carrender does not disclose said integrated antenna having a dimension thereof that is substantially as large as a dimension of said object. However, Kirkham discloses a system wherein RFID antennas are sized as the size of the package (see Figure 3, Claim 13 and Pages 8-11). It would have been obvious to one skilled in the art at the time of the invention to implement the antenna in Carrender in this manner because having a larger antenna will make it easier for receiving signals.

Referring to claim 25, Carrender discloses said RFID tag further comprising an indicator element for indicating impending expiry of viability of said product (a detector detects the remaining shelf life of the medication (see Abstract and Paragraph 0009)).

Referring to claims 26-28, Carrender discloses that said indicator element being operable to provide a signal selected from visible light, audible sound or LCD display (the system includes a visual display (see paragraph 0040)).

Claim 21 lacks an inventive step under PCT Article 33(3) as being obvious over Carrender in view of Bauer and Kirkham and further in view of US 6,703,935 B1 to Chung et al, hereafter referred to as Chung.

Referring to claim 21, Carrender does not disclose said loop antenna comprising a loop integrated into said receptacle in each of two substantially orthogonal dimensions thereof. However, Chung discloses an RFID system comprising an orthogonal plane antenna (see Column 3). It would have been obvious to one skilled in the art at the time of the invention to implement the antenna of Carrender in this manner because doing do will increase the RF field of the antenna thereby making it more reliable.

Claim 15 lacks an inventive step under PCT Article 33(3) as being obvious over Carrender in view of Chung.

Referring to claim 15, Carrender discloses the system discussed above. Carrender does not disclose that the antenna is in two dimensions that are orthogonal to each other. However, Chung discloses an RFID system comprising an orthogonal plane antenna (see Column 3). It would have been obvious to one skilled in the art at the time of the invention to implement the antenna of Carrender in this manner because doing do will increase the RF field of the antenna thereby making it more reliable.

Claim 23 lacks an inventive step under PCT Article 33(3) as being obvious over Carrender in view of Bauer and further in view of US 2004/0100380 to Lindsay et al, hereafter referred to as Lindsay.

Referring to claim 23, Carrender discloses the system discusses above. Carrender does not disclose detecting an environmental condition being selected from temperature, light exposure, weight, humidity, and shock impulse (jog). However, Lindsay discloses a system wherein medication may be stored in a container having an RFID and a sensor for detecting temperature (see Paragraphs 0023-0025). It would have been obvious to one skilled in the art at the time of the invention to implement this feature into the Carrender system because doing so would help ensure that the medication remains good and not exposed to rigid temperatures that may affect the drug.

Claim 24 lacks an inventive step under PCT Article 33(3) as being obvious over Carrender in view of Bauer and Kirkland and further in view of Lindsay.

Referring to claim 24, Carrender discloses the system discussed above. Carrender does not disclose detecting an environmental condition being selected from temperature, light exposure, weight, humidity, and shock impulse (jog). However, Lindsay discloses a system wherein medication may be stored in a container having an RFID and a sensor for detecting temperature (see paragraphs 0023-0025). It would have been obvious to one skilled in the art at the time of the invention to implement this feature into the Carrender system because doing so would help ensure that the medication remains good and not exposed to rigid temperatures that may affect the drug.

Claims 1 and 13 lack novelty under PCT Article 33(2) as being anticipated by WO 02/083507 to Stevens et al, herafter referred to as Stevens.

Referring to claims 1 and 13, Stevens discloses an object operable for communicating wireless radio frequency (RF) signals (a secondary container is used to hold a merchandise tote, wherein both have RFID tags (see Abstract, Figure 1&4 and Claim 1), said object comprising an antenna integrated therewith (the RFID has an antenna (see Abstract, Figure 1&4 and Claim 1)); said object comprises a receptacle, said receptacle being operable to receive and hold a product (the second container holds the tote (see Abstract, Figure 1&4 and Claim 1)), said product having an RFID tag attached thereto (the tote has an RFID attached thereto (see Abstract, Figure 1 and Claim 1)) and being operable for communicating said wireless radio signals between said product and said integrated antenna in said receptacle (the second container and the tote communicate (see Abstract, Figure 1 and Claim 1)).

Claims 37-40 and 45 lack an inventive step under PCT Article 33(3) as being obvious over Stevens in view of Lindsay and Bauer.

Referring to claims 37 and 45, Stevens discloses a method comprising the steps of : a) placing each product onto a first receptacle (the products are in a Tote (see Figure 1)), said first receptacle being provided with and a passive RFID tag operable to emit first wireless signals (each tote has an RFID attached (see Figure 1 and Claims 1 and 2)), b) placing said first receptacle into a second receptacle (the tote is placed in a second container (see Figure 1 and Claims 1 and 2)), said second receptacle being provided with an active RFID tag operable to receive said first signals and to emit second signals (the second container communicates with the Tote (see Figure 1 and Pages 11 and 12)), c) detecting signals selected from said first signals and said second signals (the RFID signals are sent to a database (see Figure 1 and pages 11 and 12)).Stevens does not disclose a sensor in the first and second container for detecting a condition. However, Lindsay discloses a system wherein medication may be stored in a container having an RFID and a sensor for detecting temperature (see paragraphs 0023-0025). It would have been obvious to one skilled in the art at the time of the invention to implement this feature into the Stevens system because doing so would help ensure that the products remain in good condition.
SEE CONTINUATION SHEET